Nuclear Engineering and Design 135 (1992) 433–435
North-Holland

Contents of Volume 135

CONTENTS OF ISSUE 135(1)

Thermal-Hydraulics and Related Safety

Summary description of the methods used in the probabilistic risk assessments for NUREG-1150, *R.J. Breeding, J.C. Helton, E.D. Gorham and F.T. Harper* 1
The NUREG-1150 probabilistic risk assessment for the Surry Nuclear Power Station, *R.J. Breeding, J.C. Helton, W.B. Murfin, L.N. Smith, J.D. Johnson, H.-N. Jow and A.W. Shiver* 29
The NUREG-1150 probabilistic risk assessment for the Peach Bottom Atomic Power Station, *A.C. Payne, Jr., R.J. Breeding, J.C. Helton, L.N. Smith, J.D. Johnson, H.-N. Jow and A.W. Shiver* 61
The NUREG-1150 probabilistic risk assessment for the Sequoyah Nuclear Plant, *J.J. Gregory, R.J. Breeding, J.C. Helton, W.B. Murfin, S.J. Higgins and A.W. Shiver* 95
The NUREG-1150 probabilistic risk assessment for the Grand Gulf Nuclear Station, *T.D. Brown, R.J. Breeding, J.C. Helton, H.-N. Jow, S.J. Higgins and A.W. Shiver* 117
Instructions to contributors 139

CONTENTS OF ISSUE 135(2)

Extended and Updated Selected Papers presented within Division G on FRACTURE MECHANICS AND NON-DESTRUCTIVE EVALUATION during SMiRT-10, August 14–18, 1989, Anaheim, CA, USA

Preface, *G. Yagawa* i

Computation of leak areas of circumferential cracks in piping for application in demonstrating leak-before-break behaviour, *S. Bhandari, C. Faidy and D. Acker* 141
Stable crack growth of axial flaws in pressure vessels, *W. Brocks, H. Krafka, G. Künecke and K. Wobst* 151
Crack opening and leak rate evaluation for piping components with through cracks, *H. Grebner and A. Höfler* 161
Creep crack growth verification testing in Alloy 800H tubular components, *C.P. Hunter and R.C. Hurst* 171
Analyses of fatigue crack growth and fracture in carbon steel piping, *K. Kashima, M. Matsubara, N. Miura, Y. Ando and K. Takumi* 179
An interaction analysis of twin surface cracks by the line-spring model, *Y.J. Kim, W.H. Yang, Y.S. Choy and J.S. Lee* 187
Wide-plate crack-arrest tests utilizing prototypical and degraded (simulated) pressure vessel steels, *D.J. Naus, J. Keeney-Walker, B.R. Bass, R.J. Fields, R. deWit and S.R. Low III* 197

On the application of $G(\Theta)$ method and its comparison with De Lorenzi's approach, *X.-Z. Suo and A. Combescure* 207
The effect of metallurgical factors on crack resistance of pressure-vessel materials, *V.T. Troshchenko, V.V. Pokrovsky, V.G. Kaplunenko, G.P. Karzov, V.T. Timofeyev and Y.G. Dragunov* 225
Theory based statistical interpretation of brittle fracture toughness of reactor pressure vessel steel 15X2MϕA and its welds, *K. Wallin, K. Törrönen, R. Ahlstrand, B. Timofeev, V. Rybin, V. Nikolaev and A. Morozov* 239
Instructions to contributors 247

CONTENTS OF ISSUE 135(3)

Engineering Mechanics, Structures and Materials
Numerical integration of rate constitutive equations under finite deformation, *R.N. Dubey and R.G. Sauvé* 249
Coupling effects in an elastic-plastic beam subjected to heat impact, *D. Karagiozova and E. Manoach* 267
A boundary element modelling for two-dimensional transient heat conduction, *M.A. Yaghoubi, G. Karami and A.A. Karimi* 277
Experimental analysis on factors dominating the explosive burning of solvent in a cell of a fuel reprocessing plant, *M. Suzuki, G. Nishio, J. Takada, M. Tsukamoto and T. Koike* 287
Development of a solution to the debris fretting problem, *C.A. Brown, K.L. Ford and J. Yates* 297
Thermomechanical generalisation in joints: on-axis pin bearing load, *R. Singh, T.S. Ramamurthy and A.K. Rao* 307
Non-uniqueness of thermoelastic contact in load bearing pin joints, *R. Singh, T.S. Ramamurthy and A.K. Rao* 315
Measurements of neutron shielding properties of heavy concretes using a Cf-252 source, *A.S. Mollah, G.U. Ahmad and S.R. Husain* 321

Thermal-Hydraulics and Related Safety
The effect of the virtual mass term on the stability of the two-fluid model against perturbations, *T. Watanabe and Y. Kukita* 327
Studies on diffusion and natural convection of two-component gases, *T. Takeda and M. Hishida* 341
An improved correlation for subcooled and low quality film boiling heat transfer of water at pressures from 0.1 to 8 MPa, *M. Mosaad and K. Johannsen* 355
Development of an uncertainty quantification method of the best estimate large LOCA analysis, *S.-R. Park, W.-P. Baek, S.-H. Chang and B.-H. Lee* 367

Reactor Engineering, Waste Technology, Instrumentation and Control
Design of an adaptive observer-based controller for the water level of steam generators, *Man Gyun Na and Hee Cheon No* 379
HDR concrete dismantling experiments with explosive charges, *H.U. Freund, S. Schumann, H. Wegener and K. Müller* 395
Fire protection measures in the planned Konrad repository, *H.P. Berg* 403

Technical Notes

Monitor of structural integrity for nuclear power plants, *Y.L. Mo and H.C. Wu* 413

A comparison of coarse mixing predictions obtained from the CHYMES and PM-ALPHA models, *D.F. Fletcher* 419

Letters to the Editors

Comments on the paper "The boiling transition: analysis and data comparison" by G.S. Lellouche, Nucl. Engng. Des. 116, No. 2 (1989) 117–133, *L. Biasi, R. Sala and A. Tozzi*, and Author's response, *G.S. Lellouche* 427

Announcement: 2nd International Colloquium on Ageing of Materials and Structural Lifetime Assessment and Extension Methods 431

Contents of Volume 135 433

Author index 437

Subject index 441

Instructions to contributors 443